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Office of the Secretary
Federal Communications Commission
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USA

Your reference
Votre référence

Your letter dated
Votre lettre du

Our reference
Notre référence

Darmstadt

EUM/SES/LET/11/0462 26 July 2011

Subject: EUMETSAT Response to FCC Public Notice IB Docket No. 11-109 (Comments regarding the LightSquared Technical Working Group Report)

Dear Madam,

The European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) would like to thank the Federal Communications Committee for the opportunity to provide comments regarding the LightSquared Technical Working Group Report (Public Notice IB Docket No. 11-109).

EUMETSAT is an intergovernmental organisation for monitoring weather, climate and the environment with currently 26 Member States and 5 Cooperating States. Like its pendant and partner NOAA in the US, EUMETSAT operates a network of geostationary and polar-orbiting meteorological satellites monitoring the atmosphere as well as ocean and land surfaces. The resulting data, images and products address requirements for both daily weather and long-term climate monitoring coming from National Meteorological Services and the worldwide user community, including military users. The EUMETSAT service is delivered 24 hours a day, 365 days a year.

Since October 2006, EUMETSAT operates the first European operational meteorological satellite in polar orbit, Metop-A, providing detailed observations of atmospheric conditions, such as temperature and moisture profiles, supplemented by information on the chemical composition and aerosol load of the atmosphere. These data are needed for weather forecasting and in climate and environmental monitoring. The satellite is the space element of the EUMETSAT Polar System which together with the NOAA POES polar system forms the Initial Joint Polar System Agreement (IJPS) providing and improving operational



meteorological and environmental forecasting and global climate monitoring services worldwide.

One payload on board of the series of three Metop satellites is the GRAS instrument (Global Navigation Satellite System (GNSS) Receiver for Atmospheric Sounding). GRAS is a GPS receiver that operates as an atmospheric-sounding instrument. It receives high quality radio signals from GPS navigation satellites, occulting the Earth atmospheric limb, through a tangential path through the Earth's atmosphere. The main objective of this instrument is to provide stratospheric and tropospheric temperature and humidity profiles that are assimilated into the Numerical Weather Prediction (NWP) models.

In reviewing the results and conclusions of the Technical Working Group Report regarding space-based GPS receivers in section 3.5 of the report, EUMETSAT shares the concerns expressed by NASA, that interference to space-based GPS receivers used for Radio Occultation (RO) would be severely disruptive also to the GRAS instrument on Metop.

Furthermore, the initial assessment of interference mitigation options have shown that even a restriction of the LightSquared operations to the lower 10 MHz channel would not mitigate the amount of interference to an acceptable level. Thus, EUMETSAT supports the view of NASA that the only mitigation technique which would resolve interference to space-based GPS receivers used for Radio Occultation is to relocate high power terrestrial operations to a different frequency band.

Giving the importance of the measurements of the GRAS instrument, likewise all other space-based GPS receivers used for Radio Occultation, for the meteorological user community and the society relying on the services derived from the data provided by meteorological satellites, EUMETSAT hopes that the US Administration refrains from making available frequency spectrum for LightSquared adjacent to the GPS band unless appropriate interference mitigation measures are enforced which ensure the protection of space-based GPS receivers.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "MDreis", written over a horizontal line.

Markus Dreis
Frequency Management